

What Is Claimed Is:

1. A catheterization apparatus for transseptal delivery of a device, comprising:
a sheath for traversing a septum and establishing a transseptal conduit for passage of said device across said septum;
securement means disposed on said sheath for restraining movement of said sheath relative to said traversed septum; and
a shaft for transporting said device through said sheath across said septum.
2. The apparatus of claim 1 wherein said sheath comprises a flexible tube.
3. The apparatus of claim 1 wherein said securement means comprises a reversibly expandable structure.
4. The apparatus of claim 3 wherein said reversibly expandable structure when expanded engages surface portions of said traversed septum.
5. The apparatus of claim 3 wherein said expandable structure comprises an inflatable structure.
6. The apparatus of claim 5 wherein said sheath further comprises lumen for supplying pressurizing fluids to inflate said inflatable structure.
7. The apparatus of claim 5 wherein said inflatable structure is made from an elastic membrane.

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8. The apparatus of claim 5 wherein said inflatable structure has an inflated diameter that is several times larger than the diameter of said sheath.

9. A method for establishing a transseptal conduit for device delivery during a catheterization procedure, comprising:

providing a catheterization apparatus
comprising:

a sheath for traversing a septum wherein said sheath comprises lumen for movement of a device therethrough; and

securement means disposed on said sheath for restraining movement of said sheath relative to said traversed septum;

puncturing and dilating said septum;

advancing said sheath through said punctured septum to move said securement means across said septum; and

deploying said securement means to engage surface portions of said septum and thereby restrain further movement of said sheath.

10. The method of claim 9 wherein said providing a catheterization apparatus further comprises providing said sheath in the form of a flexible tube.

11. The method of claim 9 wherein said providing a catheterization apparatus further comprises providing said securement means having a reversibly expandable structure.

12. The method of claim 11 wherein said providing said securement means having a reversibly

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expandable structure further comprises providing a structure which when expanded engages surface portions of said traversed septum.

13. The method of claim 11 wherein said providing said securement means having a reversibly expandable structure further comprises providing an inflatable structure.

14. The method of claim 13 wherein providing said sheath further comprises providing a sheath having lumen for supplying pressurizing fluids to inflate said inflatable structure.

15. The method of claim 13 wherein providing said inflatable structure further comprises providing an inflatable structure made from an elastic membrane.

16. The method of claim 13 wherein providing said inflatable structure further comprises providing an inflatable structure having an inflated diameter that is several times larger than the diameter of said sheath.

17. A catheterization apparatus for implanting a device in an atrium's appendage, comprising:

a tube assembly for providing a passage way for movement of said device through the body's vasculature and said atrium to said appendage, said assembly comprising at least an outer tube;

a shaft for transporting said device through said assembly; and

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a positioning guide for engaging atrial wall portions for mechanical support of portions of said tube assembly within said atrium.

18. The apparatus of claim 17 wherein said positioning guide is disposed on a positioning tube that retractably extends through said outer tube.

19. The apparatus of claim 17 wherein said positioning guide comprises a reversibly expandable structure.

20. The apparatus of claim 19 wherein said reversibly expandable structure comprises at least a preformed wire configuration.

21. The apparatus of claim 19 wherein said reversibly expandable structure comprises an inflatable balloon.

22. The apparatus of claim 21 wherein said tube assembly further comprises lumen for supplying pressurizing fluids to inflate said inflatable structure.

23. The apparatus of claim 17 wherein said tube assembly further comprises a delivery tube for advancing said positioning guide through said tube assembly to a location proximate to said appendage, wherein said delivery tube retractably extends through said outer tube.

24. The apparatus of claim 23 wherein said tube assembly further comprises a positioning tube that

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retractably extends through said delivery tube wherein said positioning guide is disposed on an end of said positioning tube.

25. The apparatus of claim 17 further comprising a securement means disposed on an end of said outer tube wherein said securement means engages surface portions of a septum traversed by said outer tube to restrain further movement of said outer tube.

26. The apparatus of claim 25 wherein said securement means comprises a reversibly expendable structure.

27. The apparatus of claim 26 wherein said expandable structure is an inflatable structure made from an elastic membrane.

28. A method for implanting a device in an atrium's appendage, comprising
providing a catheterization apparatus comprising:

a tube assembly for providing a passage way for movement of said device through the body's vasculature and through said atrium to said appendage, said assembly comprising at least an outer tube;

a shaft for transporting said device through said assembly; and

a positioning guide for engaging atrial wall portions for mechanical support of portions of said sheath assembly within said atrium;

percutaneously advancing said tube assembly through a blood vessel to establish a passageway to said atrium;

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introducing said positioning guide to a location about the ostium of said appendage;

deploying said positioning guide to engage atrial wall portions for mechanical support; and

using said shaft to transport said device through said passageway to a position within said appendage

29. The method of claim 28 wherein providing said catheterization apparatus further comprises providing a positioning guide that is disposed on a positioning tube that retractably extends through said outer tube.

30. The method of claim 28 wherein providing said positioning guide further comprises providing a positioning guide having a reversibly expandable structure.

31. The method of claim 30 wherein providing said reversibly expandable structure comprises providing at least a preformed wire configuration.

32. The method of claim 30 wherein providing said reversibly expandable structure comprises providing an inflatable balloon.

33. The method of claim 32 wherein providing said tube assembly further comprises providing lumen for supplying pressurizing fluids to inflate said inflatable balloon.

34. The method of claim 28 wherein providing said tube assembly further comprises providing a

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delivery tube for advancing said positioning guide through said tube assembly to a location proximate to said appendage, and wherein said delivery tube retractably extends through said outer tube.

35. The method of claim 34 wherein providing said tube assembly further comprises providing a positioning tube that retractably extends through said delivery tube, and wherein said positioning guide is disposed on an end of said positioning tube

36. The method of claim 28 wherein providing said tube assembly further comprises providing a securement means disposed on an end of said outer tube, and wherein said securement means engages surface portions of a septum traversed by said outer tube to restrain further movement of said outer tube.

37. The method of claim 36 wherein providing said securement means further comprises providing a securement means having a reversibly expandable structure.

38. The method of claim 37 wherein providing said securement means having a reversibly expendable structure comprises providing an inflatable structure made from an elastic membrane.

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